12a PIXEL

13 R G 14
11 G B 15
21

FIG.1a

12b PIXEL

B R
21 G B 15

FIG.1b

12c PIXEL

13 R G 11
15 B R

FIG.1c

10 DISPLAY

17
18

17
18

11

FIG.2a

10a DISPLAY

18

17

11

FIG.2b

16a
PIXEL

| R | G | B |

11 ⌐   21⌐

FIG.3a

16b
PIXEL

| R |
| G |
| B |

11

FIG.3b

16c
PIXEL

21 ⌐ | R | G |
     | B |

11

FIG.3c

16d
PIXEL

| R | B |
| G | —11

21⌐

FIG.3d

10b
PIXEL

R	G	B	R	G	B
R	G	B	R	G	B
R	G	B	R	G	B
R	G	B	R	G	B

17
18
11

FIG.4a

16e
PIXEL

| R |
| G | B |

FIG.3e

10c
PIXEL

17
18
11

FIG.4b

10
PIXEL

18

R	G	B	R	G	B
R	G	B	R	G	B
R	G	B	R	G	B
R	G	B	R	G	B

19
CONTROL
CIRCUITRY

20
NETWORK

FIG.5

FIG.6

10 DISPLAY with 12a PIXEL
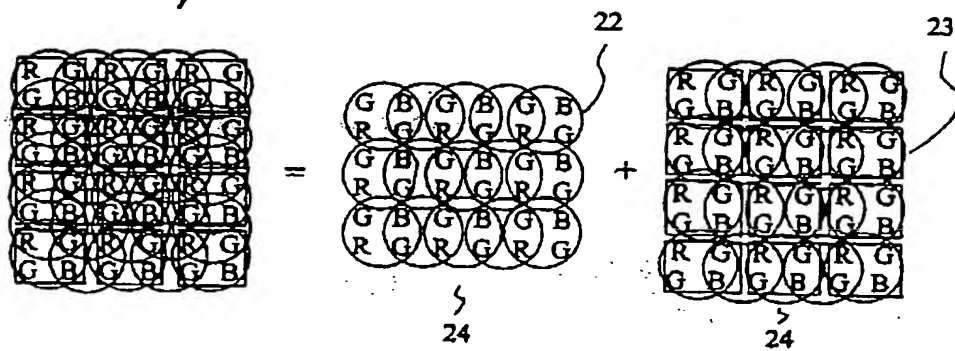
FIG. 7

FIG. 8

FIG. 8.1

FIG. 8.2
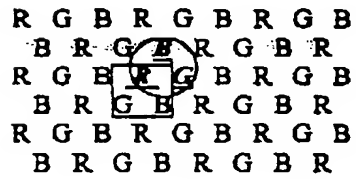
FIG. 8.3
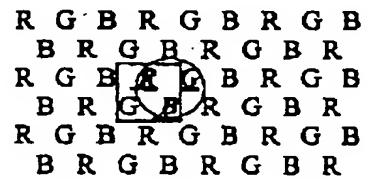
FIG. 8.4
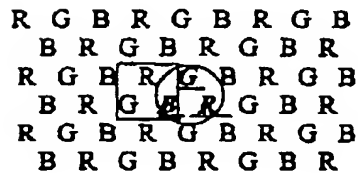
FIG. 8.5
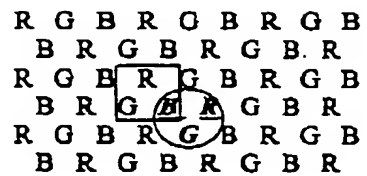
FIG. 8.6

17

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R

18   FIG. 8.7

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R

18   FIG. 8.8

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R

FIG. 8.9

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R

FIG. 8.10

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R

FIG. 8.11

R G B R G B R G B
B R G B R G B R
R G B R G B R G B
B R G B R G B R
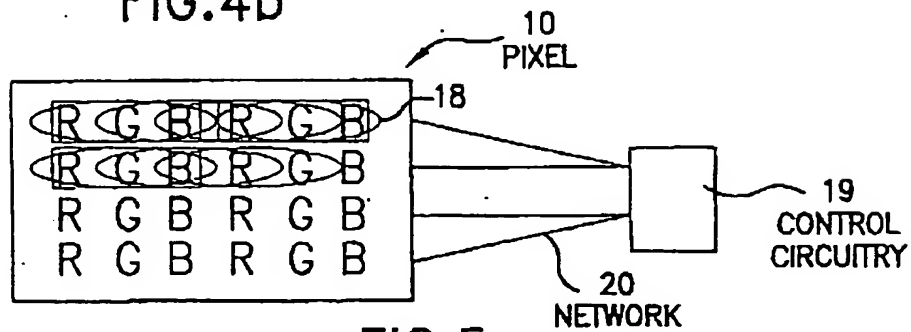R G B R G B R G B
B R G B R G B R

FIG. 8.12

FIG. 9

FIG. 9.1

FIG. 9.2

FIG. 9.3

FIG. 9.4

FIG. 9.5

FIG. 9.6

FIG. 9.7

FIG. 9.8

FIG. 10a

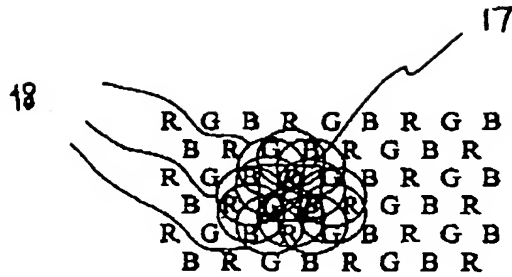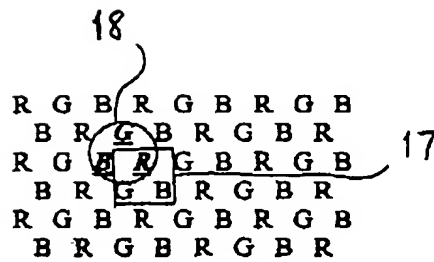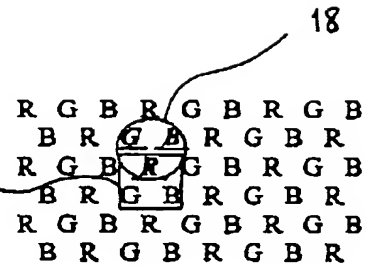FIG 10b

FIG. 11a

FIG 11b
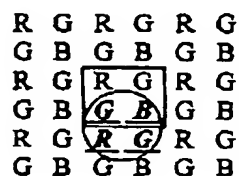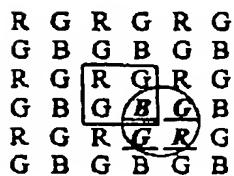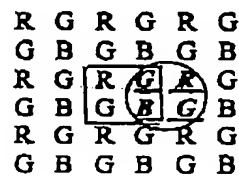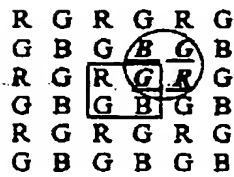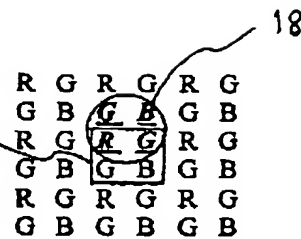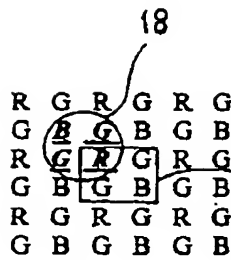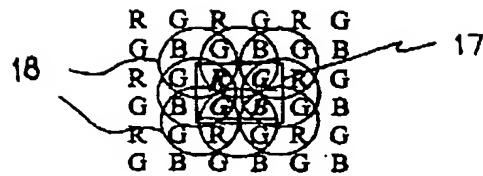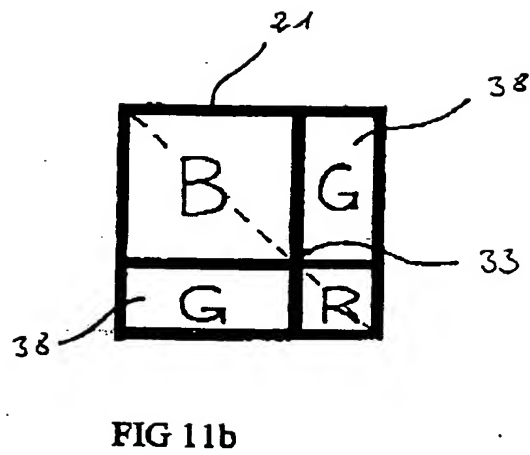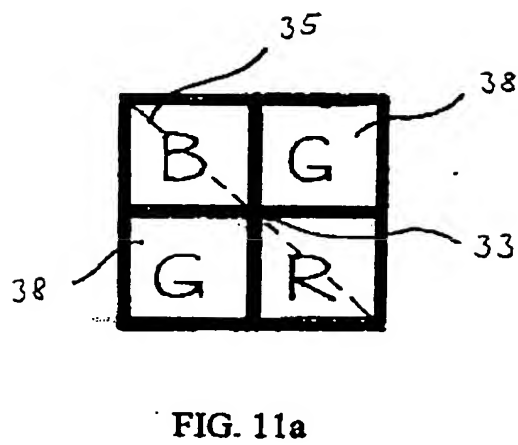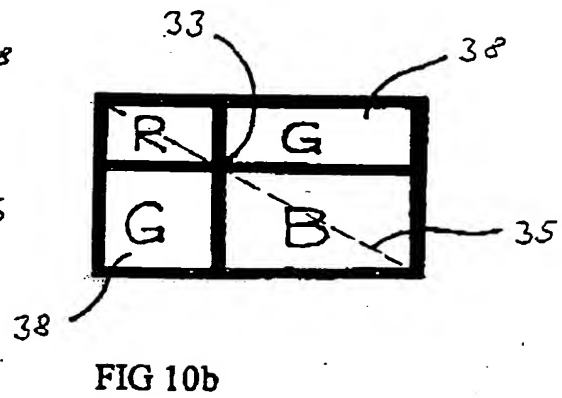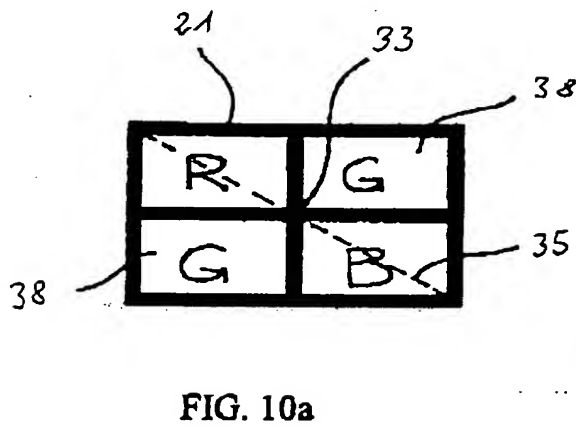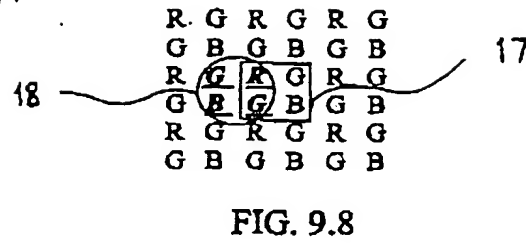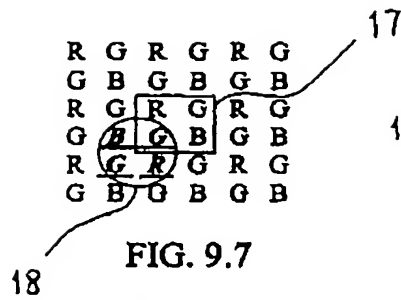
Quad pixels Display with 480 x 640 static pixels resolution and 959 x 1279 inventive dynamic pixels resolution

FIG. 12

FIG. 12a

FIG. 12b

FIG. 12c

| | | 1 | | 2 | | 3 | | | 640 | |
		1	*2*	*3*	*4*	*5*			*1379*	
1	*1*	R	G	R	G	R	G	...	R	G
	2	G	B	G	B	G	B	...	G	B
	3	R	G	R	G	R	G	...	R	G
2	*3*	G	B	G	B.	G	B	...	G	B
		R	G	R	G	R	G	...	R	G
480	*959*	G	B	G	B	G	B	...	G	B

18

FIG. 12d

11/15

17
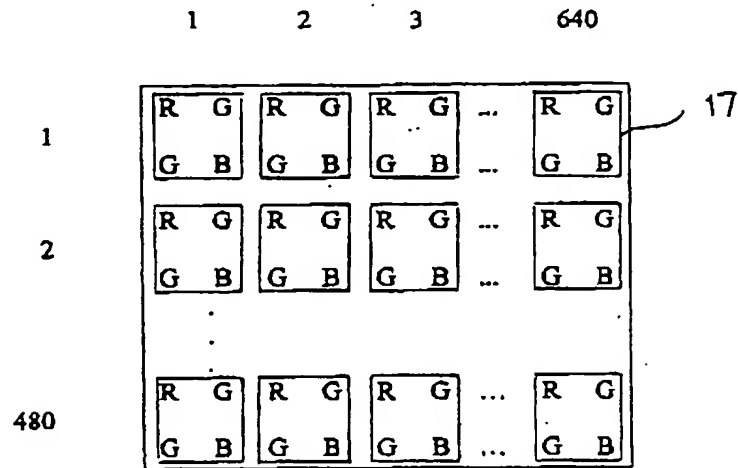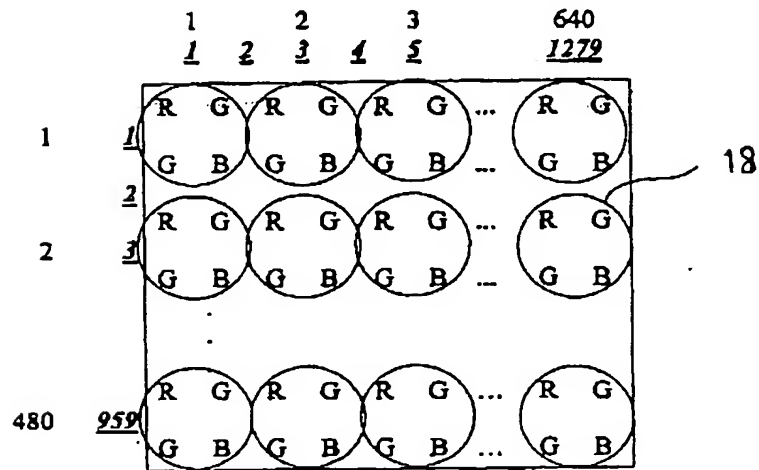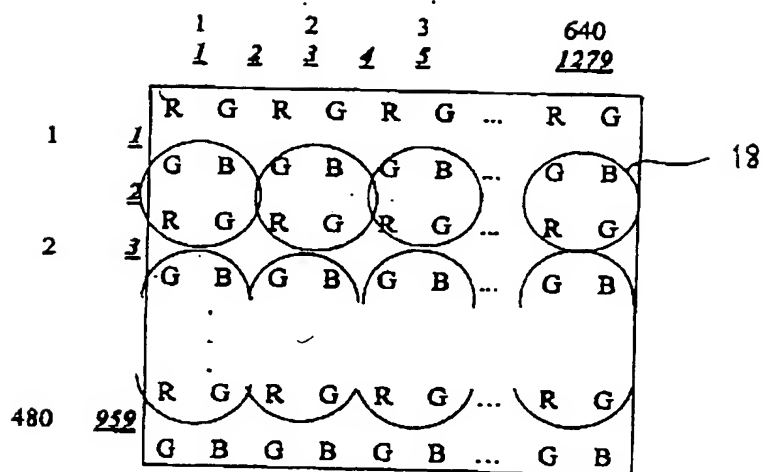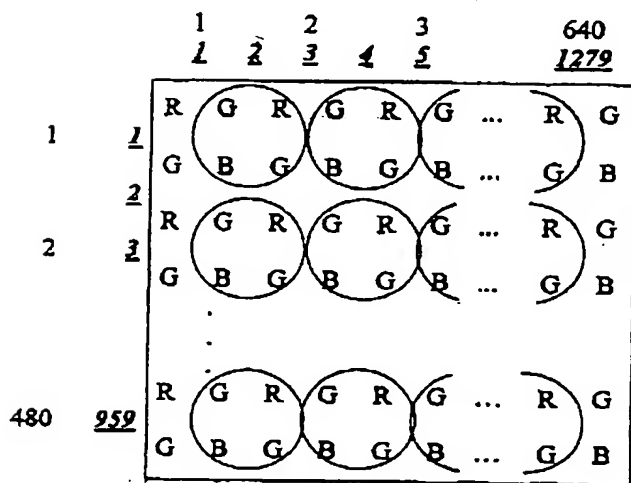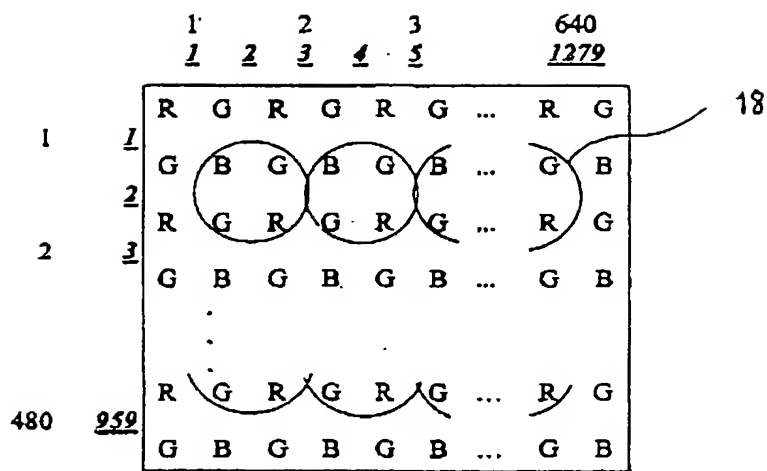
	1	2	3	4	5	6	7	8	9	
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	1
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	2
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	3
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	4
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	5
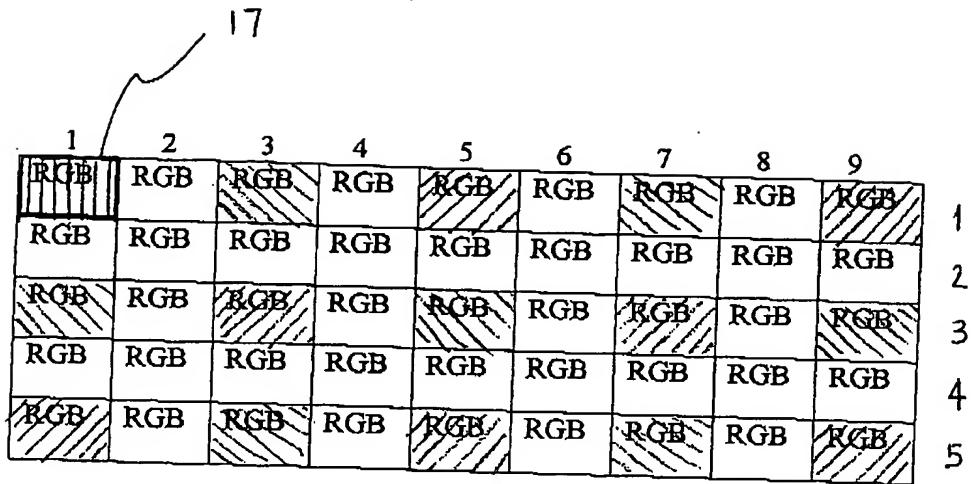
FIG. 13a Conventional RGB stripes display 9 x 5 pixels

18

	1	2	3	4	5	6	7	8	9	10	
	R	G"	R	G"	R	G"	R	G"	R	G"	1
	G'	B	G'	B	G'	B	G'	B	G'	B	2
	R	G"	R	G"	R	G"	R	G"	R	G"	3
	G'	B	G'	B	G'	B	G'	B	G'	B	4
	R	G"	R	G"	R	G"	R	G"	R	G"	5
	G'	B	G'	B	G'	B	G'	B	G'	B	6
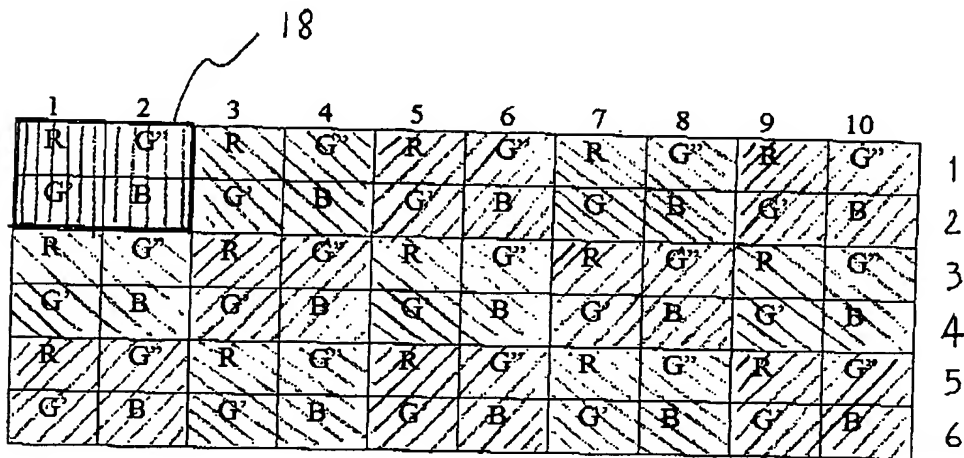
FIG. 13aa Invented display with dynamic resolution 9 x 5 pixels
Frame 1

$$G' = G'' = \frac{G}{2}$$

17

	1	2	3	4	5	6	7	8	9	
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	1
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	2
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	3
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	4
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	5

FIG. 13b   Conventional RGB stripes display 9 x 5 pixels

18

1	2	3	4	5	6	7	8	9	10	
R	G"	R	G"	R	G"	R	G"	R	G"	1
G'	B	G'	B	G'	B	G'	B	G'	B	2
R	G'	R	G"	R	G"	R	G"	R	G"	3
G'	B	G'	B	G'	B	G'	B	G'	B	4
R	G"	R	G"	R	G"	R	G"	R	G"	5
G'	B	G'	B	G'	B	G'	B	G'	B	6

FIG. 13bb   Invented display with dynamic resolution 9 x 5 pixels
              Frame 2

$$G' = G'' = \frac{G}{2}$$

17

1	2	3	4	5	6	7	8	9	
RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	1
RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	2
RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	3
RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	4
RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	5

FIG. 13c   Conventional RGB stripes display 9 x 5 pixels

18

1	2	3	4	5	6	7	8	9	10	
R	G"	R	G"	R	G"	R	G"	R	G"	1
G'	B	G'	B	G'	B	G'	B	G'	B	2
R	G"	R	G"	R	G"	R	G"	R	G"	3
G'	B	G'	B	G'	B	G'	B	G'	B	4
R	G"	R	G"	R	G"	R	G"	R	G"	5
G'	B	G'	B	G'	B	G'	B	G'	B	6

FIG. 13cc   Invented display with dynamic resolution 9 x 5 pixels
Frame 3

$$G' = G'' = \frac{G}{2}$$

17

	1	2	3	4	5	6	7	8	9	
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	1
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	2
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	3
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	4
	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	RGB	5

FIG. 13d   Conventional RGB stripes display 9 x 5 pixels

18

	1	2	3	4	5	6	7	8	9	10	
	R	G"	R	G"	R	G"	R	G"	R	G"	1
	G'	B	G'	B	G'	B	G'	B	G'	B	2
	R	G"	R	G"	R	G"	R	G"	R	G"	3
	G'	B	G'	B	G'	B	G'	B	G'	B	4
	R	G"	R	G"	R	G"	R	G"	R	G"	5
	G'	B	G'	B	G'	B	G'	B	G'	B	6

FIG. 13dd   Invented display with dynamic resolution 9 x 5 pixels
Frame 4

$$G' = G'' = \frac{G}{2}$$

Data Input of a high resolution
(X-1) x (Y-1) conventional pixels screen

⇓

Data conversion into 4 low resolution
X/2 x Y/2 inventive quad pixels frames

⇓

Weighted dot rendering method for the
quad pixels in each frame and
add all the 4 values of each dot from the
4 frames together

⇓

out put data of a X/2 x Y/2 resolution to
drive the inventive display

⇓

viewing perception of a (X-1) x (Y-1) pixels
screen on the inventive display
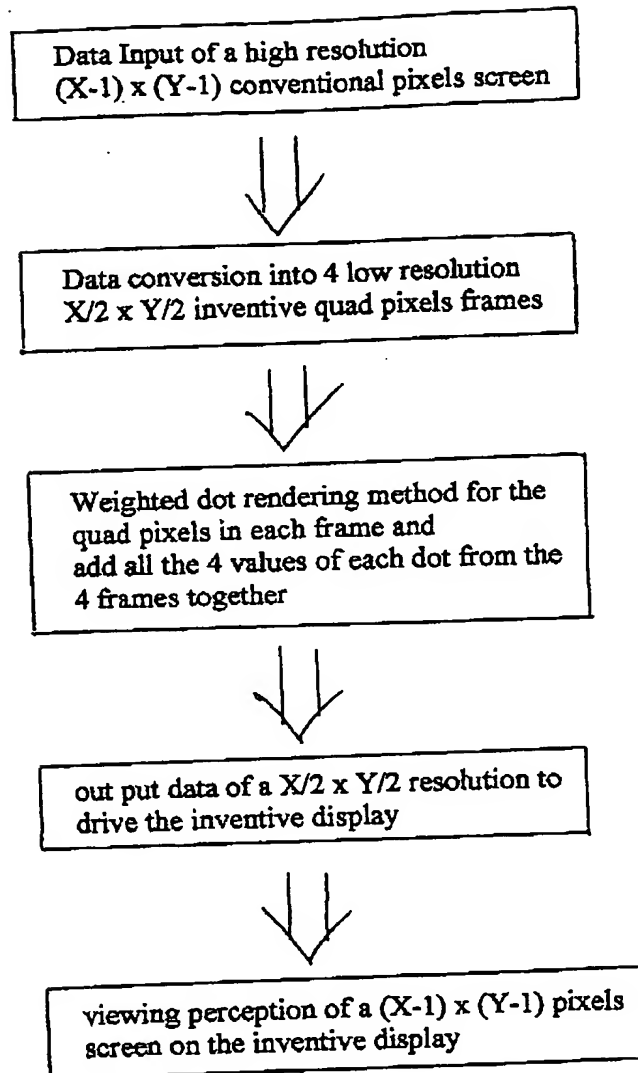
FIG. 13 e Principle of weighted dot rendering method to display a
high resolution (X-1) x (Y-1) pixels screen on a low resolution
X/2 x Y/2 quad pixel screen of the inventive display with
the perception of viewing a high resolution (X-1) x (Y-1) screen.